

CLAIMS

What is claimed is:

1. A finger mounted data entry device for a user to enter information into a computing device, the data entry device mounted on at least one of a user's two hands, each of the user's hands having a plurality of fingers and one thumb, and a palm-side and a back-side, the data entry device being adapted to accept data entry in a manner mimicking a standard keyboard that generates a signal representing a character corresponding to a key selected from a plurality of keys arranged in a base row of keys, an upper row of keys and a lower row of keys, the data entry device comprising:

two sets of thumb contacts positioned on respective ones of the user's thumbs, each set of thumb contacts including a first thumb contact which represents the base row of keys, a second thumb contact which represents the upper row of keys, and a third thumb contact which represents the lower row of keys; and

a plurality of finger contacts positioned on respective ones of the user's fingers such that contact between any one of the finger contacts and the first thumb contact on the same hand generates a signal equivalent to the signal that would be generated if touch typing was used by the user to press a corresponding key in the base row of keys, contact between any one of the finger contacts and the second thumb contact on the same hand generates a signal that is equivalent to the signal that would be generated if touch typing was used by the user to press a corresponding key in the upper row of keys, and contact between any one of the finger contacts and the third thumb contact on the same hand generates a signal that is equivalent to the signal that would be generated if touch typing was used by the user to press a corresponding key in the lower row of keys.

2. The data entry device of Claim 1, wherein the finger contacts are each positioned on the palm-side of the user's hand proximate a tip of a respective one of the user's fingers.
3. The data entry device of Claim 1, further comprising a plurality of supplemental finger contacts, wherein contact of the one of the supplemental finger contacts with one of the thumb contacts on the same hand mimics a key on at least one additional row of keys on the standard keyboard.
4. The data entry device of Claim 3, wherein each of the supplemental finger contacts is positioned proximate a nail located on the back-side of a respective one of the user's fingers.
5. The data entry device of Claim 3, wherein the at least one additional row of keys includes digits 0-9.
6. The data entry device of Claim 1, wherein each set of the thumb contacts further comprises a fourth thumb contact which represents additional keys on the base row of keys, a fifth thumb contact which represents additional keys on the upper row of keys, and a sixth thumb contact which represents additional keys on the lower row of keys.
7. The data entry device of Claim 6, wherein the fourth and fifth thumb contacts are used in combination with the finger contacts to represent a fourth row of keys located above the upper row of keys on the standard keyboard.
8. The data entry device of Claim 7, wherein the fourth row of keys includes numeric keys.
9. The data entry device of Claim 1, wherein the signal

generated is transmitted to the computing device.

10. The data entry device of Claim 1, further comprising a plurality of supplemental finger contacts positioned on respective ones of the user's fingers and used for producing signals representing special characters.

11. The data entry device of Claim 10, wherein three supplemental finger contacts are disposed on each finger.

12. The data entry device of Claim 11, wherein one supplemental finger contact on each of the user's fingers is located proximate an inner first segment of the user's finger, one supplemental finger contact is located proximate an inner second segment of the user's finger and one supplemental finger contact is located proximate an inner third segment of the user's finger.

13. The data entry device of Claim 1, wherein the standard keyboard is a QWERTY keyboard.

14. The data entry device of Claim 1, wherein the finger contacts and thumb contacts are attached to a glove that is worn by the user.

15. The data entry device of Claim 1, wherein the finger contacts and the thumb contacts are attached to a flexible skeletal structure that is worn by the user.

16. The data entry device of Claim 15, wherein the flexible skeletal structure comprises clips configured to hold the finger contacts and the thumb contacts at prescribed positions on the user's fingers and thumbs.

17. The data entry device of Claim 15, wherein the flexible

skeletal structure is comprised of thin flexible spirals carrying imprinted electrical wires, the thin flexible spirals worn around each finger.

18. The data entry device of Claim 1, wherein the finger contacts and the thumb contacts are located on rings that are worn on the user's fingers and thumbs.

19. The data entry device of Claim 18, wherein the rings on each finger are connected to each other and to a signal encoder via flexible wires.

20. The data entry device of Claim 19, wherein the flexible wires are spiral wires.

21. The data entry device of Claim 18, wherein an application and retrieving device is used for placing the rings on or removing the rings off of the user's fingers and thumbs.

22. The data entry device of Claim 1, wherein the thumb contacts and finger contacts are positioned on the fingers and thumbs of both of the user's hands.

23. The data entry device of Claim 1, wherein:
the thumb contacts and the finger contacts are positioned on one of the user's hands; and further comprising:

a sensor configured to detect positioning of the user's hand having the contacts, the sensor toggling between two sets of characters, a first set of characters being equivalent to a first set of characters on a half-keyboard in a first configuration and a second set of characters being equivalent to a second set of characters on the half-keyboard in a second toggled configuration.

24. A method for a user to enter information into a computing

device without using a keyboard, the method mimicking touch typing on a standard keyboard and comprising the steps of:

- a) positioning a plurality of finger contacts on the user's fingers and a plurality of thumb contacts on the user's thumbs;
- b) establishing contact between one of the finger contacts and a respective one of the thumb contacts of the same hand to generate a signal that is equivalent to a signal that would be generated by pressing a key on the standard keyboard using similar ^{conventional} ~~fingering~~ ^{keyboarding};
- c) generating a signal that is equivalent to the signal that would be generated by pressing the key on the standard keyboard using similar fingering in response to establishing contact between the finger contact and the thumb contact; and
- d) transmitting the generated signal to the computing device.

25. The method of Claim 24, wherein the standard keyboard is a QWERTY keyboard.

26. The method of Claim 24, wherein the finger contacts and thumb contacts are attached to a glove that is worn by the user.

27. The method of Claim 24, wherein the finger contacts and the thumb contacts are attached to a flexible skeletal structure that is worn by the user.

28. The method of Claim 27, wherein the flexible skeletal structure comprises clips configured to hold the finger contacts and the thumb contacts at prescribed positions on the user's fingers and thumbs.

29. The method of Claim 27, wherein the flexible skeletal

structure is comprised of thin flexible spirals carrying imprinted electrical wires, the thin flexible spirals being worn around each of the user's fingers.

30. The method of Claim 24, wherein the finger contacts and the thumb contacts are located on rings that are worn on the user's fingers and thumbs.

31. The method of Claim 24, wherein the thumb contacts and finger contacts are positioned on the fingers and thumbs of both of the user's hands.

32. The method of Claim 24, wherein:

the thumb contacts and the finger contacts are positioned on one of the user's hands;

wherein a sensor is configured to detect positioning of the user's hand having the contacts, the sensor toggling between two sets of characters, a first set of characters being equivalent to a first set of characters on a half-keyboard in a first configuration and a second set of characters being equivalent to a second set of characters on the half-keyboard in a second toggled configuration.